UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
GUPTA, MUKTESH G

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) *2* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1.   **Claims 1, 3-6, 9, 11-13, 16, and 18-20** are amended.

        Claim 2, is cancelled.

        Claims 1-20 have been examined on merits and are pending in this application.

Information Disclosure Statement

2.   An initialed and dated copy of the information disclosure statements (IDS) submitted on 03/17/2008, 02/18/2008, 11/14/2007, 11/05/2007, 05/22/2007, 11/03/2006, 05/26/2006, 11/10/2005, 04/11/2005 01/31/2005, 10/21/2004 and 05/24/2004 are being considered by the examiner and are attached to this office action.

Response to Amendment

3.   Applicant's **Amendment to Specification** is acknowledged.

4.   Applicant's amendment filed on 03/17/2008 necessitated a new ground(s) of rejection presented in this office action. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *emulating a device at the management device, the emulated device conforming to a second communication standard*) to the claims which significantly affected the scope thereof.

        Applicant's arguments with respect to **Claims 1-20** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent Publication No. 20030226015 to Neufeld et al., (hereinafter "Neufeld"), and

further in view of U.S. Patent No. 6560641 to Powderly; Terrence W. et al., (hereinafter

"Powderly").

As to Claims 1,7-9, and 14-16,   Neufeld anticipates method and system for

communicating with a computer management device, computer-readable medium

having computer executable instructions stored thereon, the method comprising (as

stated in par. 0034, lines 2-3, par. 0035, lines 1-2, **managed server (with computer**

management device) connected and **communicating** with a **remote console** by a

network, virtually **any** sort of **network** capable of **transmitting/receiving**

(communicating) data between two **devices**):

defining, <u>at a host computer managed by the computer management </u>device, one

or more vendor specific said vendor specific commands conforming to a first

communication standard (as stated in par. 0016, lines 8-10, remote management

solutions combine the advantages of server management computer system **_hosted_** in the **_managed server_** with **_remote management tools_** which include the capability to **_capture_** video **_data_** and **_reset sequences_** (**_vendor specific commands_**) from the managed server for **_remote display_** or replay at a later time on **_remote console_**. The capture of video data is facilitated by the close integration of a remote management tool with the managed server and the ability of the remote management tool to communicate with the **_managed server_** over **_existing communication links_** such as an industry standard **_PCI bus_**);

      emulating a device at the management device, the emulated device conforming to a second communication standard (as stated in par. 0064, lines 1-4, par. 0062, lines 1-10, par. 0057, lines 1-4, and par. 0015, lines 6-10, Neufeld anticipates, wide range of **_USB devices_** and **_virtual USB peripherals_** could be **_emulated_** by the **_IOP_**, input output processor of the **_remote server management controller_** via the **_USB interface_**, **_USB host controller_**, **_RS-232 interface_**, **_USB Ethernet controllers, SCSI controllers,_** attached **_storage devices, ATB unit, address translation bus_** for **_communicating_** between plural **_types of devices_** . **_Users_** on **_remote console_** may **_connect_** and **_communicate remotely_** to the **_remote server management controller_** via the **_Ethernet interface_** or **_modem_**, using a remote console **_application_** running on a **_remote console_** anywhere on the **_network_** that includes **_managed server._**   **_Network management tool_** is able to capture the maximum amount of information from a managed server in the maximum range of operational states of the server (for example,

(1) ***in-band online***; (2) ***in-band offline***; (3) ***out-of-band online***; and (4) ***out-of-band***

offline) and to allow ***control*** of the ***managed server*** based on that ***data.***

Powderly also in particular teaches system, method, and adapter card for

providing emulation (i.e., remote control) of a console of a host computer system from

another computer system remotely located on a network, including in particular, remote

control of a peripheral device, such as a data storage device, connected to the host

computer system over a second communication channel as stated in col. 2, lines 36-

41);

transmitting, from the host computer, the one or more vendor specific commands

to the emulated device over a communications link between the host computer and the

management device, the communications link conforming to the second communication

standard (as stated in par. 000017, lines 1-10, Neufeld anticipates a typical remote

management system, a user typically, a member of the network management team can

initiate an ***out-of-band session*** with the ***dedicated server management computer***

hosted in the ***managed server*** via a ***remote console*** application program being

executed on a ***client computer***. The management computer could be addressed by

the user to control various aspects of the operation of the managed server via control

circuitry connected to the ***embedded server management computer hosted*** by the

managed server.

Powderly also teaches, host system with adapter card comprises a processor, a

network interface controller providing a connection to the network, a peripheral device

interface controller to which the peripheral device is connected, a communications client

program executing on the processor, and at least one computer-readable medium

having stored therein a modified BIOS extension for said peripheral device interface

controller. The modified BIOS extension comprises first program code and second

program code, the second program code being embedded within the first program code

and defining a separate server program, as stated in col. 2, lines 42-52);

receiving the one or more vendor specific commands at the management device

(as stated in par. 0064, lines 1-4 and par. 0062, lines 1-10, Neufeld anticipates, **users**

engage in **out-of-band communication** with the **remote server management**

controller for the purpose of **accessing** emulated **devices**, **diagnosing**, **correcting**

and/or **preventing problems** with the **managed server**.

Powderly also teaches, upon selection by a user at the remote computer system,

the modified BIOS extension is loaded into the host memory during execution of the

host computer system BIOS, in place of the standard BIOS extension for the peripheral

device interface controller. When executed by the host processor, the first program

code of the BIOS extension (i) copies the second program code defining the server

program to a new location in the host memory, and then (ii) hooks the new location of

the server program to an interrupt of the host computer system to cause the host

processor to initiate execution of the server program on the host computer system upon

a subsequent occurrence of that interrupt, as stated in col. 2, lines 52-64);

determining, at the management device, whether the one or more vendor specific

commands are intended for the emulated device (as stated in par. 0063, lines 1-15,

Neufeld anticipates, users **_commands_** interpreted by remote server management

controller may **_establish "virtual USB peripherals_**" that will be seen **_recognized_** and allow **_communication_** with any USB-aware OS on **_managed servers_**);

Powderly also teaches, server program establishes communications with the communications client program on the adapter card, and, thereafter, upon receipt of requests from the communications client program, invokes functions of the host computer system BIOS to control the peripheral device as stated in col. 2, lines 64-67, col. 3, line 1);

and in response to determining that the one or more vendor specific commands are not intended for the emulated device, utilizing the received vendor specific commands for communicating with the management device (as stated in par. 0053, lines 1-15, Neufeld anticipates, **remote server management controller's** I/O controller **monitors** and **controls** a wide **range** of **conditions** in the **managed server** via the **slave instrumentation module** and the **remote console redirection module**.

Powderly also teaches, When the host system BIOS executes its power-on self-test (POST), it searches for any BIOS extension code provided on any adapter cards connected to its input/output bus. If a BIOS extension is located, the host loads the BIOS extension code into its host memory for execution (a process sometimes referred to as "shadowing"). After executing the BIOS extension code, the system BIOS completes its normal POST execution, which typically concludes with the booting of the host operating system, as stated in col. 4, lines 46-54).

*It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Neufeld's **remote server management controller, which is a PCI***

bus card *to incorporate Powderly's **Adapter card, also a PCI card with Peripheral Device Interface Controller, both connected to host computer I/O PCI bus for remote emulation of host systems and its attached peripherals control in absence of Host operating system through first and second communication standard.***

The motivation would have been for guaranteed control and emulation of Host or Managed servers through First and Second communication standards.

Therefore, it would have been obvious to combine these two references of Neufeld's and Powderly's disclosure in light of guaranteed communication control for various types of device with different device interfaces.

As to Claims 3, 12 and 19, *Neufeld anticipates method and system of* <u>Claims 1, 9 and 16, wherein utilizing the received vendor specific commands for communicating with the management device in response to determining that the one or more vendor specific commands are not intended for the emulated device comprises</u> *utilizing data contained in the received vendor specific commands to configure the management device* (as stated in par. 0053, lines 1-15, specific ***<u>commands</u>*** from users to ***remote server management controller's*** are processed by an independent computer system's embedded I/O controller which includes an Input/Output processor ("IOP"), and provides ***general control*** and ***<u>functions</u>*** as a ***<u>management processor</u>*** for the ***<u>remote server</u> <u>management controller</u>*** ***configuration*** and ***management***.

Powderly also teaches, administrative, configuration and control function choices are presented to the user as HyperText Markup Language (HTML) pages that the Web

server serves to the remote client program, on implementation of program code that the

processor 26 executes. The program code is preferably stored in flash memory 38. The

first of these processes comprises a Web server that enables a user to interact with the

adapter card 18 from the remote client program for purposes of administration,

configuration and control of the adapter card 18, as stated in col. 8, lines 23-26, and

lines 18-23).

Examiner uses same rational as of preceding Claims to combine the references

of Neufeld's and Powderly's disclosures.

As to Claim 4, Neufeld anticipates method of Claim 3, wherein <u>utilizing data</u>

<u>contained in the received vendor specific commands to</u> configure the management

device comprises

setting a network address of the management device based upon <u>contents</u> of the

received vendor specific commands (as stated in par. 0059, lines 1-10 embedded I/O

controller provides a ***<u>plurality of communication interfaces</u>*** that can be employed to

establish ***<u>out-of-band</u>*** ***<u>communication</u>*** ***<u>sessions</u>*** with the ***<u>remote server</u>***

<u>management controller</u>. Users may connect ***<u>remotely</u>*** to the ***<u>remote server</u>***

<u>management controller</u> via the communication interface is a ***<u>UART interface</u>*** module

174, which is operatively coupled to internal local bus 166. The exemplary UART

interface module 174 comprises two standard 16550 UARTs, each of which may

provide a ***<u>separate serial communication interface</u>***. Both UARTs are ***<u>mapped</u>*** into

the ***<u>address space</u>*** of the ***<u>IOP</u>*** 156 and can be accessed via the ***<u>PCI bus</u>*** 172 or by the

IOP 156. *Either* *UART* may be implemented so that it can be *reset* through a *control*

register in the *address space* of the *IOP* 156).

Powderly also teaches, selecting the Update Software option invokes a

procedure in the config_RPM on the adapter card 18 that allows the user to transfer

new software (i.e., program code) to the adapter card 18 in order to, for example,

upgrade the software on the adapter card 18. The Configure Board option brings up an

additional HTML page 112 that provides certain configuration options, such as, for

example, the ability to set the IP address of the adapter card 18. As illustrated, that

option would invoke a procedure in the config_RPM on the adapter card 18 which would

store the new IP address in the appropriate location on the adapter card 18, as stated in

col. 18, lines 16-27).

Examiner uses same rational as of preceding Claims to combine the references

of Neufeld's and Powderly's disclosures.

As to Claims 5, 13 and 20, *Neufeld anticipates method and system of* <u>Claims 1,</u>

<u>9 and 16, wherein utilizing the received vendor specific commands for communicating</u>

<u>with the management device in response to determining that the one or more vendor</u>

<u>specific commands are not intended for the emulated device comprises:</u>

determining coordinates of a user input cursor on a remote computer system (as

stated in par. 0048, lines 1-10, In the operation of the remote management controller,

the I/O processor periodically **reads** the **video graphics data** from the frame buffer to

determine **cursor coordinates** and whether the **data** has **changed**);

and returning the coordinates <u>to the host computer</u> in response to the received

vendor specific commands (as stated in par. 0048, lines 1-10, If the **data** has **changed**,

the I/O processor will compress the video graphics data and **transmit** the data to the

<u>**remote console**</u> via one of the <u>**communications devices**</u>, <u>**modem**</u> or <u>**NIC**</u>. The

remote console will decompress and decode the data stream and **display** it at the

remote console for viewing by the user and <u>**vice-versa**</u>.

Powderly also teaches, second process that the processor 26 runs is a

VG_remoter( ) process. This process is responsible for determining changes in the

representation of the console screen (generated by the graphics controller 22 in

response to commands from the host computer system 14), packaging information

representing those changes into TCP/IP segments, and sending the TCP/IP segments

to the remote client program. The VGA_remoter( ) process is additionally responsible

for receiving keystroke and mouse movement information from the remote client,

converting that information into keyboard/mouse controller queue entries, and then

placing those entries into the keyboard/mouse controller 46 of the host computer

system 14, as stated in col. 8, lines 26-38).

Examiner uses same rational as of preceding Claims to combine the references

of Neufeld's and Powderly's disclosures.

As to Claims 6, 10, 11, 17, and 18, *Neufeld anticipates method and system of*

<u>*Claims 1, 9, and 16*</u>, *wherein the first communication standard comprises the SCSI*

standard, the second communication standard comprises the USB standard, and

wherein the emulated device comprises a USB mass storage device (as stated in par.
0065, lines 1-4 and par. 0062, lines 1-10, wide range of **USB devices** and virtual USB
peripherals could be **emulated** by the input output processor of the **remote server
management controller** via the **USB interface**, **RS-232 interface**, **USB Ethernet
controllers** and **SCSI controllers**. **USB storage devices** floppy drives and CD drives
provide additional capability from a remote management point of view because the <u>**USB
interface**</u> allows the **remote server management controller** to act as a host for hot-
pluggable **storage devices**. This capability allows <u>**remote server management
controller**</u> to mount additional storage volumes to the managed server in an OS-
independent fashion).

Powderly also teaches, the server program is executing on the host processor
50, and because the host system BIOS 51 completes its normal execution, all of the
callable functions of the system BIOS (invoked using the INT instruction), such as the
keyboard services (INT 16 h), video services (INT 10 h), disk services (INT 13 h), serial
communications services (INT 14 h), system services (INT 15 h), parallel printer
services (INT 17 h), and others can be invoked by the server program 134. Thus, this
aspect of the present invention provides a means to invoke the functionality of the host
system BIOS via the communications between the communications client 140 on the
adapter card 18 and the server program 134 on the host computer system 14. For
example, to request the server program 134 to make a particular call to a system BIOS
function, the communications client 140 can pass a pre-defined op-code for that
function to the server program 134, along with any parameters required to carry out the

function. The server program 134 can be coded to recognize the pre-defined op-code and to make the appropriate call to the desired system BIOS function. Any results can then be reported back to the communications client 140. , as stated in col. 11, lines 3-24).

Powderly also teaches, In the preferred embodiment, the peripheral device interface controller 48 comprises a Small Computer Systems Interface (SCSI) controller implemented, as stated in col. 10, lines 3-5).

Examiner uses same rational as of preceding Claims to combine the references of Neufeld's and Powderly's disclosures.

Response to Arguments

6.   Examiner has considered, Office Actions cited by Application on IDS and signed IDS have been attached to this Office Action.

7.   Applicant's arguments, with regards to **Claims 1, and 3-20,** filed March 17, 2008 have been fully considered but they are not persuasive.

The Examiner respectfully disagrees with Applicant's arguments, on page 12-16, as updated search resulted in new grounds of rejections with additional reference of Powderly.

Therefore, in view of the above reasons, Examiner maintains rejections.

Action Final

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.   Accordingly, **THIS ACTION IS MADE FINAL**.   See MPEP

§ 706.07(a).   Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.   In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action.   In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Muktesh G. Gupta whose telephone number is 571-270-

5011. The examiner can normally be reached on Monday-Friday, 8:00 a.m. -5:00 p.m.,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William C. Vaughn can be reached on 571-272-3922.   The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MG

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2151